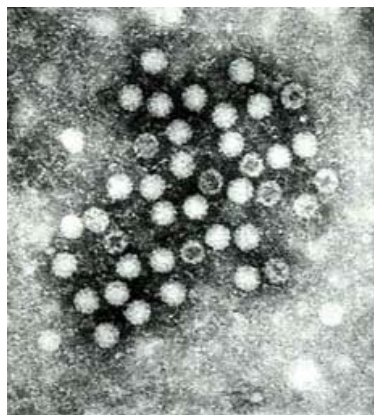


Welcome to the Division of Disease Prevention's Hepatitis A Virus (HAV) Frequently Asked Questions

- **What is HAV?**
- **Who becomes infected with HAV?**
- **How do people become infected with HAV?**
- **What groups of people are more at risk to become infected with HAV?**
- **What are the signs and symptoms of someone ill with HAV?**
- **How long do signs and symptoms last?**
- **What tests are performed to determine if I have HAV?**
- **What is the treatment for HAV?**
- **How many times can I get HAV?**
- **Can HAV stay in the body permanently?**
- **Is HAV deadly?**
- **What are the best ways to prevent becoming infected HAV?**
- **What can I do if I think I have been exposed to HAV but have not had the HAV vaccination?**
- **What does someone who is pregnant need to know about HAV?**



Hepatitis A virus particles, magnified by electron microscope

What is HAV?

Hepatitis A is inflammation of the liver caused by infection with the hepatitis A virus (HAV). Viruses are extremely small particles that cannot be seen by the naked eye. The hepatitis A virus is one of the smallest viruses and belongs to the viral family, *Picornaviridae*. ('Pico' is Latin for 'small'.)

Overall, the vast majority of people in the United States at any given time are not infected with HAV. In 2003 over 7,000 new infections were reported in the United States, and an additional 55,000 new infections may have occurred that were not reported. This is a fairly small number, considering that there are 300 million people living in the United States.



HAV continues to be one of the most frequently reported vaccine-preventable diseases in the United States.

Who becomes infected with HAV?

Anyone who is not immune to HAV can become infected after exposure to the virus. People who are already immune--either from previous infection or because they have been vaccinated against HAV--will not become infected. There is no lifelong (chronic) state of HAV.



Three out of ten people in the United States *are already immune* because of previous exposure to HAV or vaccination against HAV.

How do people become infected with HAV?

HAV enters the body.

HAV most commonly enters the body through ingestion (that is, eating or drinking a substance with HAV viral particles in it), and anyone who is susceptible (not yet immune) to HAV will very likely become infected once the virus infects their system.



The viruses travel to the liver to reproduce (or replicate). This creates millions of viral copies.



These new viruses are carried into the small intestine by bile made in the liver.



The viruses then travel the entire course of the small and large intestine (about 20 feet!) and are shed in the stool when the infected person has a bowel movement.

In order to get an HAV infection going, then, fecal material from a person infected with HAV must somehow make it into someone else's mouth. That's why the 'route of transmission' for HAV is called 'oral-fecal'. You might not think this is likely--or even possible--to happen. But it is.

For example, suppose an HAV-infected person prepares food at a restaurant.



He or she might then use the restroom to have a bowel movement and neglect to wash the hands well enough to remove very small amounts of stool which remain on the fingers.



This could leave tiny amounts of HAV-infected fecal material on the food worker's hands which could make its way into the customer's food.



If the customer happens to eat that infected food and is not already immune, he will probably become infected by HAV and ill within 2-6 weeks.

Another way to get HAV is by eating raw shellfish (such as oysters) which may have come from low-lying waters containing human feces from public dumping of sewage into otherwise fresh water.



If some of that sewage has stool infected with HAV, and that stool makes its way into those oysters, then the virus can be carried by the oysters. Unless the oysters are cooked for at least one minute at 140 degrees, which kills the virus, the person eating them may get infected.

Finally, certain sex practices involve direct contact with another person's anus. For example, after anal sex a person might remove a condom and get HAV-infected fecal material on his hands. If that person were to touch his mouth, tiny amounts of stool and virus could be swallowed and start an infection. Mouth-to-anus contact is another way for tiny amounts of HAV-infected stool to enter a person's mouth.



Remember that HAV is not normally found in human stool unless a susceptible person has been exposed to Hepatitis A. Only then does the virus build up in the liver and intestine, where it is eventually shed in the stool.

What groups of people are more at risk to become infected with HAV?

All of these groups below are at higher risk than average of ingesting human stool.

Household contacts of infected persons

Sex contacts of infected persons

Men who have sex with men

Persons, especially children, living in areas with increased rates of hepatitis A

Persons traveling to countries where hepatitis A is common

Injecting and non-injecting drug users



45% of those infected with hepatitis A have no known risk factors.

What are the signs and symptoms of someone ill with HAV?

About 25% of those adults acutely (very recently) infected with HAV have no signs or symptoms. However, the other 75% do have signs and symptoms.

Signs are clues to a patient's condition which can be observed by a nurse or doctor, and they include:

- Vomiting
- Dark urine
- Clay-colored stools
- Sudden weight loss
- Jaundice (pronounced as 'jawn-dis'. This is where the eyes and skin turn yellow).

Symptoms are clues to a patient's condition which the patient *feels*, but which cannot be observed by a nurse or a doctor, and they include:

- Decreased appetite
- Nausea
- Fatigue
- Pain in the upper-right belly
- Fever.

Two things to remember about the signs and symptoms of hepatitis A:

- They appear in susceptible people within 2-6 weeks, but usually by the 4th week after becoming infected;
- Children rarely have signs or symptoms of infection. This is one reason why HAV can often spread—undetected—in household or daycare settings.



If you are reading this web page and think you might have Hepatitis A right now, consult your primary healthcare provider for diagnosis and treatment options.

How long do the signs and symptoms last?

In most cases, people recover from the HAV illness within 4-6 weeks. Jaundice is almost always the last sign to disappear. So you may feel much better two or three weeks after becoming infected, but you may remain yellow for a few more weeks. In about 15 out of 100 HAV-infected people (15%), signs and symptoms can occur on and off again for close to nine months before the infection completely resolves (goes away permanently.)

What tests are performed to determine if I have hepatitis A?

A blood sample is all that is needed in order to perform the necessary tests for HBV.

- HAV IgM Ab (Immune Globulin M)

Looks for acute HAV antibodies circulating in your blood. **Antibodies are protein markers in the blood which tell you that at some point in the past your blood came into contact with HCV.** It takes only 1-2 weeks for the HAV IgM antibodies to become detectable, and this time is called the window period. Before the antibodies are detectable, the IgM test will be “negative.” After the antibodies are detectable, the IgM test will be “positive,” indicating acute infection, and at this point you are able to pass the infection to others.

- HAV IgG Ab Total (Immune Globulin G)

Looks for long-term HAV antibodies circulating in your blood. These antibodies tell if you have *ever had* HAV or if you were ever vaccinated against HAV.

What is the treatment for HAV?

HAV is known as a ‘self-limiting’ disease. This means that treatment by a physician or hospital is not required too often. It is true that 11-22% of those acutely (very recently) infected with HAV require hospitalization. But usually this is only for intravenous rehydration (giving fluids through a vein because the stomach will not keep fluids down). And although it may be scary to experience the signs and symptoms of hepatitis A, most people require simple bed rest and taking in fluids and food as tolerated in order to recover.

How many times can I get HAV?

You can become **ill** from acute hepatitis A only ONCE in your lifetime. After you are infected for the first time--whether you become ill or not--your body makes hepatitis A antibodies. These antibodies circulate in your blood for the rest of your life and will fight off the hepatitis A virus if you are ever again infected.



If you are ever infected with HAV you do not need the two-shot vaccination series to prevent HAV. The HAV antibodies left behind from previous infection will protect you from becoming re-infected.

Can the hepatitis A virus stay in my body permanently?

NO. There is no lifelong--or chronic--state of hepatitis A. Although 15% of people may experience illness for up to six months after the initial infection, after that HAV is expelled from the body and the protective antibodies prevent HAV infection from ever again occurring.



However, hepatitis B and hepatitis C *DO* have chronic states, and you may want to read about that on the HBV and HCV web pages.

Is HAV deadly?



HAV is responsible for killing about 100 people every year in the United States.

Most of these people are adults over 50 years of age. These people usually die from sudden liver failure within a month or so after infection. The likely reason these people cannot fight off the HAV infection is that they already have some other disease which limits or compromises their immune system and liver. So although HAV is not considered to be a major killer disease, it can be lethal in some people.

What are the best ways to prevent becoming infected with HAV?



The best way to avoid illness from HAV is to complete the two-shot vaccination series against HAV (see [HAV and HBV Vaccine Fact Sheet Link](#)).

- Good hygiene will help prevent not only HAV, but many other viruses and bacteria from entering your body.
- Always wash your hands with soap and water after using the bathroom, changing a diaper, and before preparing and eating food.
- Many public health specialists believe that washing the hands three or four times daily is one of the best ways to prevent several different types of diseases, especially flu and cold.
- Consider discussing HAV with sex partners *before* having sex.
- Cook all shellfish, especially if they have been taken from potentially contaminated waters.
- Avoid traveling to areas of the world where the incidence of HAV (that is, the number of new cases every year) is very high, unless you have had HAV or have been vaccinated against HAV.



Very high rates of HAV are found in almost all countries on the continent of Africa, and in many countries in South Asia.

What can I do if I think I have been exposed to HAV but have not had the HAV vaccination?

There is an injectable substance called Hepatitis A Immune Globulin (see HAV and HBV Vaccine Fact Sheet Link.) Treatment with Hepatitis A Immune Globulin requires only one injection. It is like the vaccine only instead of getting it *before* you are exposed to HAV, you would get it *after* you have been exposed to HAV.

So, if you recently had sexual contact with someone who you find out was ill with HAV at the time you had sex, you could consult a nurse or a doctor and explain to them your specific situation. At that time they would decide whether or not you should receive the Hepatitis A Immune Globulin.



If more than two weeks have passed since the time you think you might have been exposed to the hepatitis A virus, Hepatitis A Immune Globulin will very likely not work. At that point it is best to continue to be on the alert for signs and symptoms which may or may not develop.

What does someone who is pregnant need to know about HAV?

If a female becomes infected with HAV during pregnancy, she cannot pass on the virus to her unborn child. And it would be only in very rare circumstances that she could pass on the hepatitis A virus to her child during delivery. And although the hepatitis A vaccine is not considered dangerous to pregnant females or their offspring, most nurses and doctors prefer to wait until after pregnancy before giving the two-shot series.